Indian Journal of History of Science, 51.1 (2016) 40-47 DOI: 10.16943/ijhs/2016/v51i1/48376

Origins and Growth of Āyurvedic Knowledge

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(Received 27 January 2015; revised 22 November 2015)

Abstract

This article seeks to understand processes of the origins and growth of the indigenous knowledge of healing and health care from the Vedic and the Buddhist texts. Significantly enough, most of the references to healing and healthcare are found in the later books of *Ṛgveda* which belong to the later phase of the Vedic period. It was a combination of medicine and magico-ritual practices. *Atharvaveda* shows some advancement in the knowledge of anatomy and medicines albeit without much change in the use of magical spells and rites. The Buddhist *Piṭaka* texts for the first time contain a mention of the theory of *tridōṣa* and the treatment free from magico-religious methods. It is in the *Saṃhitā*s, particularly of Caraka's that we find the healthcare wisdom in its systematized form. The article briefly examines the structure and composition of this knowledge accrued over centuries.

Key words: *Auṣadha, Bhiṣak,* Magico-religious, *Saṃhitā*, *Tridōṣa*

1. Introduction

The earliest source of information for the history of Āyurveda is the corpus of the Ṛgvedic hymns. Conventional historiography of Āyurveda considers the hymns as a monolithic text but it has been maintained with ample evidence that the books 2 to 7 belong to an earlier stage of society whereas the books 1, 8, 9 and 10 show the features of a later stage (Sharma, 1983, pp. 22-3). Significantly enough, most of the references to healing and healthcare are found in the book 10, thereby suggesting that the earliest recorded history of medicine in India has to be traced to that period. *Atharvaveda* is an important source of information for the early history of Āyurveda, for it contains more details. The Pāli texts of the heterodox religions (*śramaṇas*) come subsequent to the brāhmaṇical texts. It is in the Sanskrit *saṃhitā* texts we find the most systematised and codified accounts of Āyurveda.

2. Knowledge of Healthcare of the Vedic Times

There are several hymns in the later part of *Ṛgveda* (*Ṛv*) which provide either simply the names of diseases or details of the ailments. Thus, we hear about several internal ailments such as *amīva* (pain), *ascites* (water-belly, probably *mahōdara*), *balāsa* (swelling), *hariman* (jaundice), *hṛdroga* (heart diseases), *jvara* (fever), *kāsa* (cough), *kilāsa* (leukoderma), *kṛmi* (worms), *rapas* (deformity and swelling of limbs), *takṣman* (malaria), *unmāda* (insanity), *viṣukandha* (tetanus) *yakṣma* (tuberculosis), constipation and retention of urine, as well as external diseases like broken limbs, flesh wounds, loss of blood, etc. (Zysk, 1991, pp. 12-89)

The nomenclature of the ailments seems to indicate at least a primary level of categorization of diseases, mainly based on the areas affected or even pertaining to the mode of manifestation. The *mantra*s do not indicate any causal explanation

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for various ailments other than wrath of celestial beings. The statements in all probability point to a society at the level of cattle rearing and therefore, milk and milk-products endowed with healing powers are used as medicine. These ailments are attributed generally to the wrath of demons or evil spirits and therefore their treatment involves appeasement of the demons. There is an idea of dividing diseases into internal and external. It is not at all easy to explain the exact meaning of the accounts in the texts convincingly. There are references in the hymns to some celestial beings like Aśvinideva and Indra who were capable of curing the diseases and warding off devils. This is the reason why the Vedic medicine is often described as magico-religious. Though Treatment in the Ṛgvedic period was generally magico-religious in nature, it did not preclude the use of various herbs and juices as medicine.

It appears that the physicians (*bhiṣak*) of the Vedic period had some knowledge about the human anatomy as the ritual texts dealing with the sacrifice of horses and goats. It was necessary in the ritual procedure to utter the names of each part of the body as it was cut and offered to the deities (*Ṛv*.1.162.18). Fairly accurate lists of internal organs of horses and human beings have been preserved and transmitted primarily through the Vedic ritual texts called *brāhmaṇa*s. Repair of various parts of the human body including head and limbs finds mention in the hymns of the later *manḍala*s of *Ṛgveda*.

When we reach the *Atharva* tradition the situation is different especially regarding the knowledge of the human body (*śarīra*), the treatment (*cikitsa*), and the concept of specialised medicinal preparation (*rasāyana*). The prayer to make man free from the forces of death (*mṛtyu*), seems to be an indicator of their desire to remain young and attain longevity. Subsequent phases in the Vedic Age represented by the *Atharvaveda* shows some advancement in the knowledge of medicine albeit the treatments are often mixed with chanting of hymns and magical rites. *Atharvaveda* viewed human body with more empirical grounds in various contexts. Internal organs like *mastiśka* (brain), and *hṛdaya* (heart) are mentioned in the *Atharvaveda* (Av.7.20.2). The flow of blood is also mentioned in the hymns (*Av.* 7.36.2). Even though a classification of diseases on the basis of the areas which were affected by them is not traced, what could be assumed from the hymns is that there were attempts to treat diseases on the basis of the area of manifestation of diseases. *Netrarōga,* eye-sore, *pupphusarōga,* disease of the lungs, and *hṛdayarōga,* heart disease are some of the examples in the Atharva tradition.

The disease *jvara* is represented as *kapha'*s brother and *kāsa*'s sister (*Av.*5.22.12). This interesting statement clearly indicates that there were attempts to explain complicated ailments caused by more than one reason. An attempt to differentiate between *yakṣma* and *rājayakṣma* is seen in (*Av.*6.8.20). Characteristic features of different types of *jvara* and *takma* are found identified (*Av.* 19.39.10). It is important to note that the *Atharvaveda* observes that the general reason of *jvara* and *takma* is poor digestive fire (*Av.*1.25.1-2). This is quite in agreement with the scientific knowledge, that the disease is *āmaya, ie* based on disorders in the abdomen. References to other diseases like *kāsa* (cough) (*Av.*1.12.3), *balāśa* (*Av.*5.22.11), *apacit* (apsis)*;* (*Av.*6.2.5), *rājayakṣma*, tuberculosis (*Av.* 5.22.12)*, harima,* jaundice (*Av.*4.9.3) *mūtrarōdha,* urinary block (*Av.* 2.3.9) and *kilasa* (*Av.*1.23.1) clearly show some development in the medical observation and treatment.

Vedic society had developed and established certain methods of treatment, which were found effective in curing some of the ailments. Some of the practices like that of exposing to sunlight for the diseases like jaundice especially for juvenile patients are continued even today. *Atharvaveda* mentions treatment of jaundice and heart disease by exposing to sunlight.

"*Hṛdrōgam mama sūrya harimanam ca nāśaya*" (*Av.*10.50.11). This need not necessarily mean that the Vedic people were aware of the relation between jaundice and the sun rays. This practical knowledge was probably acquired by constant observation.

The *kṛmi,* one of the causative factors for the disease manifestation has been treated with several medicines. This method of treatment is found scattered in different contexts of *Ṛgveda* and *Atharvaveda*. *Vaca* (*Av.*2.31.2), *ajaṣṛṅgi* (*Av.*4.37.2), *pṛśniparṇi* (*Av.*2.25.2) *arṣapa* (*Av.*8.6.1), *apāmārga* (*Av.*4.18.8), *kaśmarya* (*Śatapathabrāhmaṇa, Av.*7.4.1.7), *kuṣṭha* (*Av.*16.36.1), *gulgulu* (*Av.*4.37.3). There are a few medicines indicated as *jvarouṣadha* like *kuṣṭha* (*Av.*5.4.2) and *jangida* (*Av.*19.34.10). *Śami* was a drug for infertility (*Av.*6.11.1). "As the broken parts of a chariot are reassembled, the wound occurred from the weapons and the injuries after the fall of big rocks on body may be healed by you (*Av.*4.12.7). The arrows penetrated into the heart were removed. (*Av.*6.90.1). References regarding castration as a mode of punishment is also seen (*Av.*4.37.7)

Medicines in the Vedas are yet another subject of interest for the students of Āyurveda. The importance lies not only in the attempt in classifying them but also in understanding the difference in the properties of drugs from various sources. Nature (*Prākṛtika*), minerals (*khanija),* marine (*samudraja),* creatures (*prāṇija*) and herbs (*udbhija*) are the sources of medicines as described in the Vedas. *Prākṛtija* (natural sources) includes the Sun/*sūrya* and Moon/*candra* (*Av.*6.83.1), *Agni/* fire (*Av.*10.4.2,5.29.1), *mārut/*wind (*Rv.*2.33.13), *Jala/*water (*Rv.*1.23.6). *Khanija* included *añjana* (*Av.*4.9.9) *sīsa/*lead (*Av.*1.16.4) etc. *Samudraja* includes *śankha/*caunch (*Av.*4.10.4), *Praṇī Mṛgaśringa Auṣadhi* (*Av.*3.7.1). It has been clarified without doubt that the proper administration of medicine will give fruitful result. (*Rv.*10.97.22), the strength of *bhiṣak* is *auṣadhi* (*Rv.*10.97. 6). Different herbal medicines and their indication are mentioned in the Vedas. e.g: *ajaśṛngi* (*Av.*4.3. 7), *apāmārga* (*Av.*4.1.7; 4.1.9; 4.6.5). Many other important herbal medicines including *kuṣṭha, jala, talasa, daśavṛkṣa, pata, pippali, pṛśniparṇi, rohiṇi, lākṣa, sahasraparṇi, sōmalata* etc. are also appropriately explained in the Vedas in several instances. The magical aspect of Vedic medicine never disappeared completely in India. It survived in classical Āyurvedic medicine in the treatment of ailments in the cure of childhood diseases.

The Vedic healing practice was based on contemporary knowledge of diseases and medicines as evident in the approach of their classification. The practice seems to imply some amount of reflexive thinking on the part of the practitioners. It is true that the origin of medicine was attributed to celestial beings in the form of myths and legends. At the same time it has to be borne in mind that the myths are not intended actually to inform about the authorship of the knowledge. As we have noted earlier, they are intended mainly to give sanction to a particular aspect. The Vedic knowledge of diseases and medicines was accumulated over several hundreds of years and improved upon by many generations. Vedic hymns are *srūti*-s in the sense that they are based on the sounds of the uttered word. This would suggest that they follow the principles of oral tradition. One of the characteristic features of oral traditions is the use of words, phrases, lines and stanzas in the form of stock expressions. The Vedic similes are composed by using the oft repeated formulaic stock expressions, since the hymns are transmitted orally and preserved by means of memorizing. Since the *mantra*s are sacred, they should be free from errors and losses. For the faultless recitation of the entire body of the *mantra*s, a whole set of techniques known as *jaṭa* and *ratha* (recitation from the beginning to the end upwards and downwards) was in vogue among the Vedic scholars.

Apart from attributing the art of healing to the celestial beings *Agni, Varuṇa, Indra* and *Aśvindevas* the *Atharvaveda* explains the qualities of *manuṣa bhiṣak* (human physician). A man who stands for the well being of patient is considered to be *śreṣṭhabhiṣak* (noble physician) and *subhiṣak* (meritorious physician) as mentioned in *Av.*2.9.5. Such a physician will mingle with other physicians for the well being of the suffering people. However, the physicians were generally considered as impure due to their dealings with unclean objects and also all sections of society. Physicians were not admitted to the sacrificial rites. On the other side, the physicians earned their livelihood by administering cures and enhanced their knowledge by keen observation and exchange of ideas with other physicians (Zysk, 1998, Intro. pp.7-11).

3. Knowledge of Healthcare under the *Śramaṇa-s*

The mid-first millennium BC was the Age of heterodox religions (*śramaṇas*), which witnessed tremendous changes in Indian history and culture. Social protest against the Vedic ritualism and its inherent weaknesses was the force that was at work beneath these trends. Several ascetic teachers such as Gauthama Buddha, the Enlightened One, Makhali Gosāla of the *Ajīvika* sect, Nāthaputta of the *Nirgrantha* group, Mahavira of the Jains and Pakuddha Kaccāyana the teacher of atomism, were working among the people preaching their principles of heterodox ideas and ideals. Naturally, there were occasions when these teachers themselves entered into debates on conceptual problems. Romila Thapar observes that 'the thread of social protest winding through these heterodox teachings was indicative of a perception of change' and the law of causality, logical and rational (Thapar, 1984, pp. 50-51). The whole problem of causes of diseases propounded by the Buddha has to be understood in the light of this philosophical worldview. Gradual development of the Buddhist monastic tradition of medicine, by inclusion of rules pertaining to drugs and treatments for specific ailments rallied on codification of medical knowledge, also present in large part in the early Āyurvedic medical treatise. The ascetic tradition of healing and health care are codified in the *nikāya*s and the *piṭaka*s. It had set in the tradition of systematic recording of knowledge and treatment experience. Legendary accounts and the Pāli texts show that the Buddhist monasteries played a significant role in the growth of medical practice and its ethics. Gradual development of the Buddhist monastic tradition of medicine, by inclusion of rules pertaining to drugs and treatments for specific ailments rallied on codification of medical knowledge.

Buddhist Canonical texts of the *nikāya*s and the *piṭaka*s refer to some incidents in which the Buddha explains the causal connections of diseases. While questioning the Gautama Buddha on the issue of the causes of sufferings of mankind, a wandering monk Sivaka, probably a physician, said that according to some *śramaṇa*s and *brāhmaṇa*s, suffering was caused by *karma* i.e. previous acts only. Gautama Buddha held this view as incorrect and explained that the human suffering was caused primarily by *pitta* (bile), *śleṣma* (phlegm), *vāta* (wind) and their combination (*sannipāta*). In addition to these, he enumerated four other factors such as the change of the seasons, the stress of unusual activities, the movement out in haste at night inviting a snake-bite, and the consequence of actions (*karma*). It is significant that this eight-fold causation of diseases implies the theory of *tridōṣa* or humoral imbalance, which is central to the Āyurveda. By *karma* the Buddha had not meant *purvakarma,* action of the previous birth, but it could be of violent and traumatic actions (*āgantuka*) causing injury to the body as in the case of judicial punishments.

Dīghanikāya has an account of the human body in all its aspects and impurities. According to the description, there is in the body, hair, nails, teeth, skin, flesh, sinuses, bones, bone marrow, kidney, heart, liver, pleura, spleen, lungs, bowels, intestines, stomach, excrement, bile, phlegm, semen, fat, tears, grease, saliva, mucous, serous fluid and urine. The main source of the ascetic knowledge of the human anatomy was the result of careful observation in the butcher houses. *Dīghanikāya* (22.6) prescribes that the monk should reflect on the body and learn its parts in the same way as a skilled butcher or his skilful pupil. Another way of collecting information about the human body involved persistently focusing and concentrating on a decomposing corpse thrown on a charnel ground. The monk was also to reflect on a putrefying body dead from 1-2 days becoming being devoured by animals until its bones become bleached white and eventually turned to powder. It is from the keen observation of the decomposing bodies combined with the knowledge of the anatomy of animals gave early Buddhist ascetics excellent sources of information for understanding the gross internal and external structures of the human body. Being heterodox the Buddhists were free from the brāhmaṇical inhibitions on this kind of practices.

According to Kenneth Zysk the first documented codification of this medical lore took place as wandering ascetic assumed a more stationary existence cloistered in the early Buddhist monastery (Zysk, 2000, pp. 38-43). The regular and systematic fund of medical knowledge was developed in the Buddhist monastic institutions. Ascetic physicians travelled from place to place treating the sick monks, lay devotees and also common people. Systematic pedagogical programmes and methods of treatment were also developed most probably in the Buddhist monastic establishments. Taxila was perhaps the most renowned among the early centres of various disciplines including the medicine. Famous physicians like Jivaka Komarabacha was a product of Taxila. He studied for seven years as a disciple of the semi-legendary physician Ātreya. The entire process of production and dissemination of knowledge in this age was in the gamut of materialistic thinking and wisdom most probably, a much welcome influence of the Buddhist tradition. The preceptor Ātreya is regarded as the fountainhead of the traditional knowledge of healthcare. Agniveśa compiled the teachings of his teacher Ātreya who seems to have made the first codification.

Medical knowledge was not unfamiliar to the ascetic wanderers from the 6th century BC. It has been considered that especially during the Buddhism it was a religious part of doctrines and monastic discipline. Buddha's treating of middle path way always equate with the Ayurverdic principle of '*Sadvritta*', '*Savadharmeṣu Madhyama*'. Animal urine (usually from cattle) is included in the medical section of *Vinaya* as the allowable treatment for Snakebites (*Mahāvagga* 6/14/6). Medicines included all those things, necessary for the care of the sick and were to be used only to ward off pain and to maintain health, never to give pleasure (*Sabbasava Sutta* 27/ *Majjhima Nikāya* 1,10). The chapter on medicines (*Bhaśajjakhanḍaka*) of the *Mahāvagga* specifies the requisites medicines. The five basic medicines like ghee (*sappi*); butter (*navanīta*); oil (*taila*); honey (*madhu*) and molasses (*phanita*) were permitted by the monks. With the evolution of *Sangha* and the development of *vinaya* rules the medicine grew into an entire pharmacopeia, including numerous foods (*Mahāvagga* 1/30.40). An empirical knowledge of human anatomy on the basis of dissection and direct observation of human body is fundamental to the Āyurveda. In all probability this can be understood as an influence of the Buddhist tradition. Kenneth Zysk observes that a vast store house of medical knowledge developed by the *śramaṇa* physicians constitutes what came to be known as Āyurveda.

4. Systematisation of Āyurveda in the *Saṃhitās*

Ātreya's teachings are believed to have been redacted by Caraka and that naturally formed the basis of *Caraka saṃhitā.* Dṛdhabala, a native of Kashmir who is tentatively ascribed to the third or fourth century AD completed it by supplying missing portions. By the time it reached Caraka, the text must have been compiled and redacted by more than one person. From the mode of transmission of knowledge, it can be assumed that the preceptors and their disciples were following the method of catechism in teaching and learning. This was a great period of original thinking, codification, and proliferation of texts. With the establishment of the *saṃhitā*s the knowledge of medicine became well codified and the practice widely accepted as a system of effective curing, the physicians and their art of healing acquired a higher status (Chattopadhyaya, 1977).

Caraka saṃhitā can perhaps be taken as the first major composition, highly systematised and organised as a practitioner's text. Caraka, the organiser of the text was indeed a noted physician himself. His *saṃhitā* is made up of 8 *sthāna*s: *sūtrasthāna* (section on the contents), *nidānasthāna* (the section on diagnosis), *vimānasthāna* (the section on measurements), *śarīrasthāna* (the section on body), *indriyasthāna* (the section on senses), *cikitsasthāna* (the section on treatment), *kalpasthāna* (the section on pharmaceuticals) and *sidhisthāna* (the section on the skill). *Caraka saṃhitā*, technically speaking, is oriented to *kāyācikitsā* (general medicine). The chapters including *rasāyana* and so many other chapters give emphasis for prevention from a disease rather than cure. By the time of this treatise, Āyurveda was understood as subsidiary (*upaveda*) to *Atharvaveda*. As suggested by N.V.K. Warrier, it could also be assumed that an 'Atharva school' was founded or existed after the *Atharva veda*, rationalizing its tradition (Warrier, 2005, pp. 12-13). The style of *Caraka saṃhitā* is nearer to that of the *brāhmaṇa*s and the *upaniṣad*s, and so the redactor Caraka could also be attributed to the same age. It stands much ahead of other texts of later times in different ways.

Suśruta saṃhitā is another major text. It deals with surgery and the related aspects of knowledge and practice. The text is organized into 5 *sthāna*s such as *sūtra/*basics, *nidāna/*etiology, *śarīra/*anatomy and physiology, *cikitsa/*remedy and *kalpa/*preparations. The *sthāna*s are divided into 120 chapters. *Uttarāsthana* is an appendix, adjoined later. Though the focus of this treatise is on surgery, the overall aim of the work is to deal with the prevention of inherent diseases and methods for the maintenance of health. *Suśruta samhitā* gives equal importance for theory and practice. Like Caraka, he too emphasizes the need for mastery of many disciplines. He considers learning knowledge from the book alone is stealing, whereas it should be learnt from the predecessors too.

The most important section in *Suśruta samhitā* on *śalyakṛiya*, surgery has three phases: '*pūrvakarma'*(pre-operation procedure), '*pradhānakarma*'(treatment), and '*Paścātkarma*' (post- operative procedure). The *pūrvakarma* not only defines preparation of the patient, but also preparation of the instruments involved in the operation. Interestingly *Suśruta saṃhitā* has a separate section (*SS. śārīrasthāna*, v.47-51; K.G. Zysk, pp.35-36) on a technique for obtaining knowledge of the human body involving a type of dissection: After having cleansed the corpse there is to be a complete visual ascertainment by the bearer of the knife (surgeon) who has a definite knowledge of the human body. One should learn what is visually perceived and what is mentioned in the textbook to have a greater understanding of the human body. It is mentioned that the body chosen for dissection should be neither badly injured nor aged (100 years). The cleansed body must be covered by *muñja* grass or the tree bark or *kuśa* grass or hemp, put in a cage or net and

placed at a concealed point in a driving stream for seven nights. Then the completely putrid body should be scraped layer by layer by using the *vetrivel* grass or coarse animal hair or bamboo for seeing the various major and minor parts of the body, both internal and external. This method of learning anatomy and physiology is not found mentioned in the Pāli canons, although some of the travellers' accounts of a later date do testify the prevalence of this practice among the Buddhists too.

Eight different procedures of surgery have been explained in the *samhitā*. They are: excision (*chedya*), incision (*bhedya*), scrapping (*lekhya*), puncturing (*vedhya*), probing (*ecya*), extraction (*āhārya*), draining (*viśrāvya*) and suturing (*sīvya*). This description itself gives light to the sound knowledge, he had on this subject. Interestingly enough, surgical techniques that are widely practiced by the surgeons of modern medical science today follow the same techniques prescribed by Suśruta. This could be the reason why Suśruta is rewarded the name of "Father of surgery" even today. Most of the surgical equipments used in olden days are more or less used even now with necessary modifications. It is understood from *Suśruta saṃhitā*, that the anaesthesia was not used widely in those days. At the same time certain intoxicants were used to reduce pain. Qualities for a good surgeon and the diet to be observed during the surgery days are well explained in the text. It is clearly mentioned without any chances of doubt that the surgical instruments, while on the process of surgery should avoid bones, joints, blood vessels, nerves and pluses as far as possible.

Suśruta saṃhitā mentions 101 surgical instruments and the techniques of operation are many. Apart from the instruments it explains other important means of cure like *kṣārakarma* (alkalis), *agni karma* (cauterization) and *jaḷūka* (leeches). Alkalis prepared out of various medicines used internally as well as externally to normalize the three humors (*tridoṣa*). Cauterization according to the *ācārya* is more powerful than alkalis, because the cure is permanent. Mostly this is tried where other therapeutic measures like medicine, surgery and alkalis fail. Leeches are used for blood-letting. Selection of leeches, cleaning, utilizing, and relieving them are explained in detail. Blood-letting was found most effective in many cases. Certain techniques of disinfection which includes fumigation of herbal plants and, as a new technique of application of ghee by massage etc. for regaining the consciousness of the patient are also prescribed in the text of Suśruta. The procedure of dressing, medicinal and dietary restrictions of a post operative patient is explained at length. Different types of wounds clean and unclean, their symptoms, and their healing methods are also described in detail.

5. Conclusion

An earlier tradition of healing and health care seems to have become entrenched over several centuries through the pre-Vedic and Vedic periods. This traditional practice of healthcare was subjected to an empirico-rational scrutiny resulting in a hermeneutic shift during the period of heterodox sects, particularly the Buddhists. By the time of Gautama Buddha this traditional practice acquired the foundation of empirically grounded and systematically generated knowledge of logical base. It soon became a formally coded knowledge expanded and imparted at high seats of contemporary learning like Taxila. This knowledge of healthcare was best codified and systematised in its most enriched form in the classics namely the *saṃhitā*s that owed their empirical base to the śramaṇic approach. It spread all over the sub-continent under the patronage of rulers. The importance shown by the emperor Asoka in the dissemination of the healthcare knowledge and distribution of medicinal plants all over his empire is a documented event in history (Major Rock Edict II). In short, the origins

and growth of Āyurvedic knowledge show the trajectory starting from traditional magico-religious phase of superstitious and mysterious interpretation of diseases and treatment to a sound system of practice based on logical interpretation of diseases as physiological and pathological phenomena. It is clear that the healthcare practices in traditional India must have been a long process of accretion of experiential wisdom expanded and improved over the centuries. This suggests a common origin for both the brāhmaṇic and śramaṇic approaches, which accounts for their inevitable congruence.

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